Comp6421: Assignment4 Report

Section1: List of Semantic Rules Implemented

1. Undeclared local variable.
2. Multiple declarations of parameters.
3. Undeclared free function.
4. Multiple same name parameters, method overloading.
5. Multiple same name local variables

Section2: Design

Step1: The Abstract Syntax tree is used as an input which will be provided as a feed to the SymbolTableGeneratorVisitor Class. This class will process each node of the tree and prepare their respective Semantic Table for specific nodes and attach to the respective node.

Step2: As soon as the table is prepared for the node, the tables are printed in the order of "Global Table", "Class Table" and "Individual Function Table". All these tables were printed in ".outsymboltable" file.

Step3: The complete AST node is integrated with Semantic Tables and feed as an input for SemanticErrorVisitor Class. This class will process all the nodes and validate all the expressions and logics using the Semantic table at nodes.

Step4: The output of the Step 3 is being written to the ".outsemanticerrors" file.

Section3: Use of Tools

No as such specific tools has been used.